

devices, and Internet appliances. Embodiments of the eNB 22 and the AP 23 were noted above as a base station, remote radio head, etc.

**[0062]** Various embodiments of the computer readable MEMs 20B, 22B, 23B include any data storage technology type which is suitable to the local technical environment, including but not limited to semiconductor based memory devices, magnetic memory devices and systems, optical memory devices and systems, fixed memory, removable memory, disc memory, flash memory, DRAM, SRAM, EEPROM and the like. Various embodiments of the DPs 20A, 22A, 23A include but are not limited to general purpose computers, special purpose computers, microprocessors, digital signal processors (DSPs) and multi-core processors.

**[0063]** Various modifications and adaptations to the foregoing exemplary embodiments of this invention may become apparent to those skilled in the relevant arts in view of the foregoing description. While the exemplary embodiments have been described above in the context of the LTE and LTE-A system, as noted above the exemplary embodiments of this invention may be used with various other types of wireless communication systems.

**[0064]** Further, some of the various features of the above non-limiting embodiments may be used to advantage without the corresponding use of other described features. The foregoing description should therefore be considered as merely illustrative of the principles, teachings and exemplary embodiments of this invention, and not in limitation thereof.

1-21. (canceled)

22. A method comprising:

collecting at a cellular network node information about at least interference in a plurality of channels in unlicensed spectrum; and

using the collected information to update an allocation of the channels among at least two different access points.

23. The method according to claim 22, wherein the information is collected from measurement reports received from each of the access points.

24. The method according to claim 23, in which the measurement reports indicate whether the respective channel is available or reserved.

25. The method according to claim 23, in which the information is further collected from at least one further measurement report received from a user equipment reporting on at least one of the channels in the unlicensed spectrum, in which the further measurement report is received over a wireless channel in licensed spectrum.

26. The method according to claim 22, in which the information includes at least one of:

a recommendation for at least one of the channels; an estimated capacity for at least one of the channels; and a model of traffic for at least one of the channels.

27. The method according to claim 22, in which using the collected information to update an allocation of the channels comprises balancing traffic among the at least two different access points.

28. An apparatus comprising

at least one processor; and

at least one memory including computer program code;

the at least one memory and the computer program code is configured to, with the at least one processor, cause the apparatus to at least:

collect information about at least interference in a plurality of channels in unlicensed spectrum; and

use the collected information to update an allocation of the channels among at least two different access points.

29. The apparatus according to claim 28, wherein the information is collected from measurement reports received from each of the access points.

30. The apparatus according to claim 29, in which the measurement reports indicate whether the respective channel is available or reserved.

31. The apparatus according to claim 29, in which the information is further collected from at least one further measurement report received from a user equipment reporting on at least one of the channels in the unlicensed spectrum, in which the further measurement report is received over a wireless channel in licensed spectrum.

32. The apparatus according to claim 28, in which the information includes at least one of:

a recommendation for at least one of the channels; an estimated capacity for at least one of the channels; and a model of traffic for at least one of the channels.

33. The apparatus according to claim 28, in which using the collected information to update an allocation of the channels comprises balancing traffic among the at least two different access points.

34. The apparatus according to claim 28, in which the apparatus is a cellular access node.

35. A computer program product comprising a non-transitory computer-readable medium bearing computer program code embodied therein for use with a computer, the computer program code comprising:

code for collecting information about at least interference in a plurality of channels in unlicensed spectrum; and

code for using the collected information to update an allocation of the channels among at least two different access points.

36. The computer program product according to claim 35, wherein the information is collected from measurement reports received from each of the access points.

37. The computer program product according to claim 36, in which the measurement reports indicate whether the respective channel is available or reserved.

38. The computer program product according to claim 36, in which the information is further collected from at least one further measurement report received from a user equipment reporting on at least one of the channels in the unlicensed spectrum, in which the further measurement report is received over a wireless channel in licensed spectrum.

39. The computer program product according to claim 35, in which the information includes at least one of:

a recommendation for at least one of the channels; an estimated capacity for at least one of the channels; and a model of traffic for at least one of the channels.

40. The computer program product according to claim 35, in which using the collected information to update an allocation of the channels comprises balancing traffic among the at least two different access points.

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